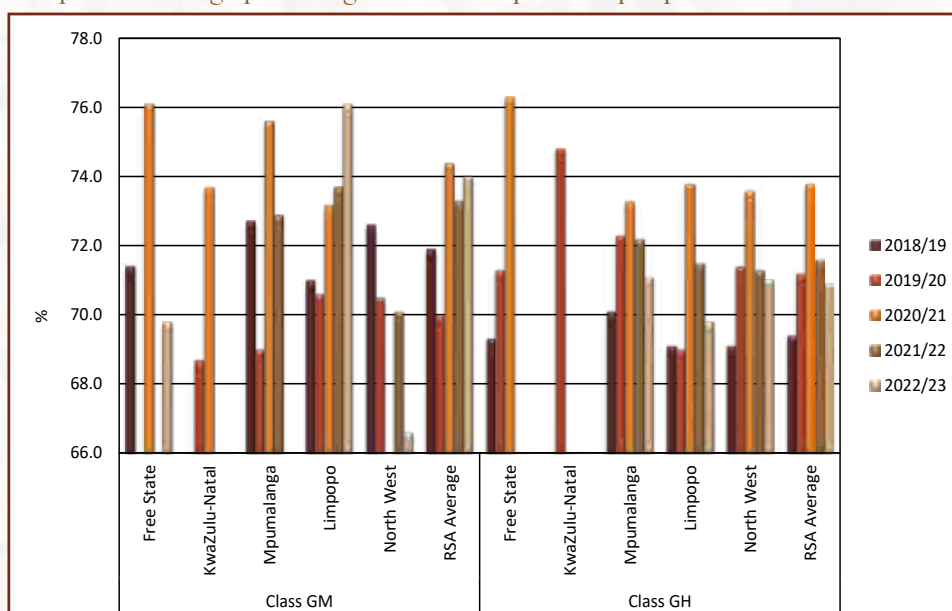


Graph 21: Average percentage total starch per class per province over five seasons



The crude fat content of the crop samples was determined for the second time this season. The national average for GM sorghum was 3.4% and that for GH sorghum 2.8%. The previous season's averages were 3.5% for GM sorghum and 3.0% for GH sorghum.

The crude protein, total starch and crude fat contents of the samples were calculated and reported on a dry basis.

Hunterlab colour determinations were done on a milled fraction of dehulled sample above the 1.8 mm slotted sieve. The Hunterlab spectrophotometer separates the components of reflected color into a three-dimensional colour scale, namely the Hunter L, a, b scale where L represents lightness (100 being white and 0 being black), a represents green to red variation and b represents variation from blue to yellow.

Please see Graphs 22 to 27 for a comparison of the ranges in the L, a, b values obtained on GM and GH sorghum over five seasons. The minimum and maximum values are based on a single composite grading sample's result in a specific season.

Although there are currently no acceptable ranges for these parameters defined, the colour must be within the consumer-acceptable range, which traditionally are products with a slightly pink hue. Not only the dehulling process, but also other traits such as pigmentation differences determine the end product colour.

Mycotoxin analyses were performed on all 33 sorghum crop samples. The samples were tested by means of a SANAS ISO/IEC 17025 accredited multi-mycotoxin method using UPLC-MS/MS. With this technique simultaneous quantification and confirmation of Aflatoxin B₁; B₂; G₁; G₂, Fumonisin B₁; B₂; B₃, Deoxynivalenol, 15-ADON, HT-2 Toxin, T-2 Toxin, Zearalenone and Ochratoxin A is possible in one run.

None of the samples tested positive for any of these mycotoxins this season or in the 2017/18, 2019/20 and 2020/21 seasons. One sample from Limpopo tested positive for Fumonisin B₁ residues in the previous season. Fumonisin, Deoxynivalenol (DON) and Zearalenone residues were found on some of the samples of the 2018/19 season. None of the levels however raised any concerns.

Please see mycotoxin results in Table 10 on pages 32 and 33.

The Methods section of this report on pages 35 to 37 provide a description of the procedures and methodologies followed.